

"PATENT"

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
LESTER F. LUDWIG)
SERIAL NO.: UNKNOWN) Group No: UNKNOWN
FILED: September 30, 2003) Examiner: UNKNOWN
FOR: PERFORMANCE ENVIRONMENTS)
SUPPORTING INTERACTIONS AMONG)
PERFORMERS AND SELF-ORGANIZING PROCESSES)

Commissioner for Patents
Post Office Box 1450
Alexandria, Virginia 22313-1450

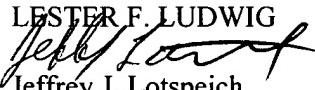
Sir:

INFORMATION DISCLOSURE STATEMENT

Applicant hereby cites the documents listed in accompanying Form PTO/SB/08A with respect to the above-referenced patent application under the provisions of 37 CFR, §§ 1.56, 1.97 and 1.98. With one exception, the documents listed on this Form are issued U.S. patents or published U.S. patent applications, or have been made of record in parent applications Nos. 09/812,400 and 09/313,533. Accordingly, Applicant is not submitting duplicate copies of these documents, but requests that they be listed on the face of any patent granted on the above application (See 1138 TMOG 39, second column, last paragraph, last sentence). Foreign patent application, listed as document B1, is a newly submitted reference and a copy of such is enclosed. The filing of this Information Disclosure Statement will not be construed to mean that a search was conducted or that no other material information, as defined by 37 CFR 1.56, exists.

The Examiner is respectfully requested to make the listed documents of record in connection with the prosecution of the subject application.

Respectfully submitted,

By: 
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Substitute for form 1449A/PTO

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Examiner Name

Attorney Docket Number

2738-22

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)			
A1		US-1,947,020	02-13-1934	Ranger	
A2		US-3,493,669	02-03-1970	Elbrecht et al.	
A3		US-3,591,699	07-06-1971	Cutler	
A4		US-3,612,741	10-12-1971	Marshall	
A5		US-3,651,242	03-21-1972	Evans	
A6		US-3,730,046	05-01-1973	Spence	
A7		US-3,742,133	06-26-1973	Cohen	
A8		US-3,805,091	04-16-1974	Colin	
A9		US-3,813,473	05-28-1974	Terymenko	
A10		US-3,878,748	04-22-1975	Spence	
A11		US-3,956,959	05-18-1976	Ebihara et al.	
A12		US-3,962,945	06-15-1976	Creager et al.	
A13		US-4,075,921	02-28-1978	Heet	
A14		US-4,080,867	03-28-1978	Ratanangsu	
A15		US-4,117,413	09-26-1978	Moog	
A16		US-4,122,742	10/31/1978	Deutsch	
A17		US-4,151,368	04-24-1979	Fricke et al.	
A18		US-4,182,213	01-08-1980	Iodice	
A19		US-4,274,321	06-23-1981	Swartz	
A20		US-4,318,327	03-09-1982	Toups	

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Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)				
B1		EP-0 574 213-A1	12-15-1993	Synaptics, Inc.		

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	A21	US-4,365,533	12-28-1982	Clark, Jr. et al.	
	A22	US-4,781,099	11-01-1988	Koike	
	A23	US-4,794,838	01-03-1989	Corrigau, III	
	A24	US-4,797,608	01-10-1989	White	
	A25	US-4,852,444	08-01-1989	Hoover et al.	
	A26	US-4,991,488	02-12-1991	Fala et al.	
	A27	US-5,033,352	06-23-1991	Kellogg et al.	
	A28	US-5,045,687	09-03-1991	Gurner	
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	A34	US-5,262,585	11-16-1993	Greene et al.	
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	A37	US-5,357,048	10-18-1994	Sgroi	
	A38	US-5,378,850	01-03-1995	Tumura	
	A39	US-5,440,072	08-08-1995	Willis	
	A40	US-5,442,168	08-15-1995	Gurner et al.	

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	A41	US-5,459,282	10-17-1995	Willis	
	A42	US-5,471,008	11-28-1995	Fujita et al.	
	A43	US-5,475,214	12-12-1995	DeFranco et al.	
	A44	US-5,565,641	10-15-1996	Gruenbaum	
	A45	US-5,585,588	12-17-1996	Tumura	
	A46	US-5,659,145	08-19-1997	Weil	
	A47	US-5,659,466	08-19-1997	Norris et al.	
	A48	US-5,665,927	09-09-1997	Taki et al.	
	A49	US-5,668,338	09-16-1997	Hewitt et al.	
	A50	US-5,675,100	10-07-1997	Hewlett	
	A51	US-5,741,993	04-21-1998	Kushimiya	
	A52	US-5,763,806	06-09-1998	Willis	
	A53	US-5,786,540	06-28-1998	Westlund	
	A54	US-5,827,989	10-27-1998	Fay et al.	
	A55	US-5,850,051	12-15-1998	Machover et al.	
	A56	US-5,852,251	12-22-1998	Su et al.	
	A57	US-5,932,827	08-03-1999	Osborne et al.	
	A58	US-5,969,283	10-19-1999	Looney et al.	
	A59	US-6,047,073	04-04-2000	Norris et al.	
	A60	US-6,051,769	04-18-2000	Brown, Jr.	

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OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS				
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		
	C1	"Biax True Stereo Pickups," product description, Musician's Friend catalog.		T ²
	C2	"Korg's New Z-1 Helps Fiddler Keep His Funk", Music and Sound Retailer, Mar. 1998.		
	C3	"Synaptics Targets Vision, Sound processing."		
	C4	"Yamaha VL1", advertisement, Electronic Musician, Apr. 1994.		
	C5	APPELMAN, D. RALPH, The Science of Vocal Pedagogy, Theory and Applications, 1967, Indiana University Press, Bloomington, Indiana, USA.		
	C6	Biaxe Ragamaster, Box 15426, Stamford, CT, 06901-0426, USA.		
	C7	BICANIC, DANE, ed. Photoacoustic and Photothermal Phenomena III. 1992, vol. 69, Springer-Verlag, Berlin Heidelberg, Germany.		
	C8	BORMANS, JAN "MPEG-4 systems need specialized CPUs", Electronic Engineering Times, Jan. 25, 1999.		
	C9	Boss DF-2, Roland Corporation, 7200 Dominion Circle, Los Angeles, CA 90040-3696, USA.		
	C10	Boss OC-2 Service Manual, Roland Corporation, 7200 Dominion Circle, Los Angeles 90040-3696, CA, USA.		
	C11	Boss SE-70 Super Effects Processor Algorithm Guide, Roland Corporation, 7200 Dominion Circle, Los Angeles, CA 90040-3696, USA.		

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	C12	Boss SE-70 Super Effects Processor Owners Manual, Roland Corporation, 7200 Dominion Circle, Los Angeles, CA 90040-3696, USA.	
	C13	CP-40 Pitch to Midi Converter, Roland, 7200 Dominion Circle, Los Angeles, CA 90040-3696, USA.	
	C14	DMP9-16 Digital Mixing Processor, Yamaha Corporation, PO Box 1, Hamatsu, Japan.	
	C15	DP/4, Ensoniq, 155 Great Valley Parkway, Malvern, PA 19355, USA.	
	C16	E-Bow, Heet Sound Products. PO Box 3312, 611 Ducommun St., Los Angeles, CA 90051, USA.	
	C17	EPSTEIN, "The Search for New Chemical Oscillators," in Chemical Instabilities, Nicolis and Baras (eds.), 1984, D.Reidel Publishing, Dordrecht/Boston/Lancaster.	
	C18	EPSTEIN, IRVING R, "New Chemical Oscillators", Non-Equilibrium in Chemical Systems, 1984, Springer-Verlag, Berlin/Heidelberg, Germany.	
	C19	Ernie Ball, Volume Pedal, Musician's Friend Catalog.	
	C20	Etc., PETER, Letter to Editor, Experimental Musical Instruments, Jun., 1996.	
	C21	EWI3020, AKAI Corporation, Box 2344 Fort Worth, TX 76113, USA.	
	C22	FIELD, RICHARD J., and NOYES, RICHARD M. "Oscillations in Chemical Systems IV Limit Cycle Behavior in a Model of a Real Chemical Reaction," J. Chem. Physics, Vol. 60, No. 5.Mar. 1974.	

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	C23	GI-10 Guitar-Midi Interface, Roland Corporation, 7200 Dominion Circle, Los Angeles, CA 90040-3696, USA.		T ²
	C24	GRAY, PETER, and SCOTT, STEPHEN K, "Chemical Oscillations and Instabilities," 1990, Clarendon Press, Oxford, Great Britain.		
	C25	GSP 21 LEGEND, Digitech, 8760 South Sandy Parkway, Sandy, UT 84070, USA.		
	C26	GZOWSKI, JOHN "Sirens and Sympathetics", Experimental Musical Instruments, Jun. 1997, vol. 12, No. 4.		
	C27	HARA, YOSHIKO "Matsushita demos multilayer MPEG-4 compression", Electronic Engineering Times, Apr. 19, 1999.		
	C28	JOHNSON, COLIN "Computer program recognizes facial expressions", Electronic Engineering Times, Apr. 12, 1999.		
	C29	JOHNSON, COLIN "Image sensor tracks moving objects in hardware", Electronic Engineering Times, Apr. 5, 1999.		
	C30	Kaoss pad dynamic effect/controller, Korg Proview Users' magazine, Summer 1999.		
	C31	KING and WHITE, "Tactile Sensing Array Based on Forming and Detecting an Optical Image," UC Berkeley Preprint.		
	C32	KURAMOTO, YOSHIKI, "Rhythms and Turbulence in Populations of Chemical Oscillators", Physica 106A (1981), pp. 128-143, North-Holland.		
	C33	LEIBERMAN, DAVID "Software goes on a search-and-locate mission", Electronic Engineering Times, Jan. 25, 1999, pp. 44.		

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	C34	LEIBERMAN, DAVID "Touch screens extend grasp into consumer realm" Electronic Engineering Times, Feb. 8, 1999.		
	C35	Light Wave Pickups, Audio Optics, Santa Barbara, CA., USA.		
	C36	LIM, AGRAWAL, and NEKLUDOVA "A Fast Algorithm for Labeling Connected Components in Image Arrays", Technical Report Series, No. NA86-2, Thinking Machines Corp., 1986 (rev. 1987), Cambridge, Mass., USA.		
	C37	Lord LTS-300T Tactile Array Sensor, Lord Corp., Ind. Aut. Div., 407 Gregson Dr., PO Box 8200, Cary, NC, 27511-8200, USA.		
	C38	LUDWIG, L., "A Generalized Linear Amplitude Processor," Electronotes, Dec. 1979, vol. 11, No. 108.		
	C39	LUDWIG, L., "A Square-Wave Frequency-Division Sub-Octave Cross-Product Module," Electronotes, Feb. 1979, Vol. 11, No. 98.		
	C40	LUDWIG, L., "GLAP Revisited," Electronotes, Jul. 1981, vol. 13, No. 127.		
	C41	LUSHER, E. (unk) "Photoacoustic effect: principles and applications: proceedings of the First International Conference on the Photoacoustics," 1984, Vieweg.		
	C42	MIDI Player MP-88, Miditemp, Max-Halbe-Strasse 1 85716 Unterschleissheim, Germany 0049-89-3-10-61-38.		
	C43	MOOG, ROBERT A. "The Human Finger-A Versatile Electronic Music Instrument Component", Audio Engineering Society Preprint, 1977, New York, NY, USA.		
	C44	MS4-MS3 Solton, Ketron lab, dist. By Bell Douvox Corp. 126 Rt. 303, 10994 W. Nyack, NY, USA.		

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	C45	MURPHY, AAMODT, Spicer and Royce (eds) Photoacoustic and Photothermal Phenomena II, 1990, vol. 62, Springer-Verlag, Berlin Heidelberg, Germany.		T ²
	C46	NAGY-UNGVARAI, Z. and HESS, BENNO "Control of Dynamic Pattern Formation in the Belous-ov-Zhabotinsky Reaction" Physica D (1991) North-Holland.		
	C47	NICOLIS, G and BARAS, F (eds.), Chemical Instabilities, 1984, D.Reidel Publishing, Dordrecht/Bos-ton/Lancaster.		
	C48	NICOLIS, G., "Nonlinear Phenomena in Chemistry", Introduction to Nonlinear Science, 1995, Cambridge University Press, Great Britain.		
	C49	Omnichord OM-250m, Suzuki, Box 261030, San Diego, CA 92196, USA.		
	C50	ORBAN, M., KURIN-CSORGEI, K., ZHABOTINSKY, A., and EPSTEIN, I., "New Indicators for Visualizing Pattern Formation in Uncatalyzed Bromate Oscillatory Systems", J. Am. Chem. Soc. 1998, Vol. 120, pp. 1146-1150.		
	C51	PC-1600 Midi Controller, Peavy Corporation, 711 A St., Meridan, MS 39302-2898, USA.		
	C52	PENNYWITT, KIRK "Robotic Tactile Sensing," Byte, Jan., 1986.		
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	C54	PMC10 Program. MIDI Foot Controller, Digitech, Salt Lake City, UT, USA.		
	C55	Review of KORG X-230 Drum (later called "Wave Drum"), Electronic Musician, Apr. 1994.		

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First Named Inventor

Lester F. Ludwig

Group Art Unit

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	C56	RICH, ROBERT "Buchla Lightning MIDI Controller", Electronic Musician, Oct. 1991.	
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	C61	RONSE, CHRISTIAN and DEVIJVER, PIERRE A., Connected Components in Binary Images: the Detection Problem, 1984, Research Studies Press/ John Wiley & Sons Inc., New York, NY, USA.	
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	C81	VISINTIN, A. (ed.), Models of Hysteresis, Longman Scientific & Technical, 1993, Harlow, En-gland.		
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